

Abstract

This invention concerns a validation protocol for determining whether an untrusted authentication chip is valid, or not. The protocol may be used to determine the physical presence of a valid authentication chip and from that determine whether a consumable containing the chip is valid. In another aspect the invention also concerns a system for validating the chip. The invention involves generating a random number in a trusted authentication chip, then applying a keyed one way function to the random number in both the trusted authentication chip and an untrusted authentication chip and comparing the outcomes. A match indicates that the untrusted chip is valid.